

ABSTRACT

An apparatus generates quasi-complementary turbo codes in a communication system. The apparatus includes a turbo encoder, an interleaver
5 for interleaving symbols output from the turbo encoder according to a give rule, and a code generator for generating the quasi-complementary turbo codes by puncturing and repeating the interleaved symbols from the interleaver. Further, an apparatus decodes quasi-complementary turbo codes in the communication system. The decoding apparatus includes a code decoder for generating code
10 symbols according to a code rate transmitted through depuncturing sub-codes of quasi-complementary turbo codes transmitted from a transmitter and soft combining the sub-codes, a deinterleaver for deinterleaving the symbols output from the code decoder, and a turbo decoder for decoding an output of the deinterleaver.